various techniques have been used to obtain endometrial tissue for diagnosis, including aspiration, jet-washing and endometrial biopsy studies. Since the classical method—dilatation and curettage—requires admission to hospital, general anesthesia and considerable cost to the patient, clinicians have been anxious to find a reliable office procedure to obtain endometrial tissue in the evaluation of abnormal bleeding or for endometrial dating. Curently the jet-washing technique as described by Gravlee and the suction endometrial biopsy as described by Novak are the most popular.

It seems that, overall, endometrial biopsy study is a superior technique. Jet-washing is simple and very well tolerated by patients without anesthesia. Statistically, however, there is a larger percentage of missed endometrial carcinoma (9 percent) than with endometrial biopsy (7.9 percent). In addition, the jet-washing technique is consistently less accurate than endometrial biopsy in the diagnosis of adenomatous hyperplasia and in endometrial dating. Both techniques have a 12 to 16 percent incidence of obtaining insufficient tissue for diagnosis. Therefore, even though the suction biopsy technique is slightly more uncomfortable to the patient, it seems to be superior.

Currently, there is a variant technique of endometrial biopsy using vacuum aspiration as described by Vabra. After extensive clinical trials in Europe, it seems to be slightly more accurate than the routine suction biopsy and significantly more effective as a therapeutic modality in evacuation of uterine tissue.

Since both suction biopsy and jet-washings have a substantial incidence of obtaining insufficient tissue for diagnosis of endometrial cancer, a negative or inconclusive result should not be relied upon. For this reason, many clinicians are returning to dilatation and curettage as the primary procedure. In an outpatient setting, dilatation and curettage can be done under paracervical block anesthesia with reduced expense to the patient and the security that a second procedure will not be necessary.

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Hypertension in Children and Adolescents

HYPERTENSION has generally been considered an adult problem, and little attention has been focused on the incidence of this disorder in either children or adolescents. The recording of blood pressure as a routine part of a physical examination may be viewed as less important during childhood or adolescence than in later years. Information concerning the mechanisms, end points and therapy of essential hypertension has been developed from studies of adult populations, so that little is known about this entity in young people. Recently, however, two developments have taken place which should increase our concern about hypertension in children and adolescents: (1) observations that the siblings of adults with known essential hypertension, regardless of their age, are more likely to have elevated blood pressure levels than the general population and (2) hypertension in adolescents is being discovered more frequently through community blood pressure screening programs.

Primary hypertension in children is rare; secondary causes of hypertension in childhood usually involve abnormalities of renal development and function, but may include coarctation of the aorta, adrenal tumors and disorders of the central nervous system. The incidence of primary hypertension in adolescents is unknown, although it is probably more frequent than hitherto suspected. A search for remedial causes of hypertension in adolescents with elevated blood pressure still is indicated.

The flush technique may be used to record blood pressure in infants. Blood pressure measurements should be a routine part of physical examinations in every child more than 2 years old. The blood pressure cuff must be carefully selected in order to obtain accurate readings. The inner rubber bag should be wide enough to cover two thirds of the length of the arm and three quarters of the circumference of the upper arm or thigh while leaving the antecubital or popliteal fossa free.

There are no major differences in blood pressure levels between boys and girls of the same age. Although precise information concerning the normal range of blood pressure in children and teenagers is not available, the figures shown in Table 1 for the 95th percentile for systolic and diastolic pressures serve as an adequate guide to unsafe levels for any age.

TABLE 1.—*95th Percentile Values for Blood Pressure By Age*

Age	Systolic Pressure (mm of Mercury)	Diastolic Pressure (mm of Mercury)
0-6 months	110	60
3 years	112	80
5 years	115	84
10 years	130	92
15 years	138	95

Family physicians have both the responsibility and opportunity to contribute to the early diagnosis and appropriate management of hypertension in children and adolescents. Careful follow-up of single observations of elevated blood pressure is required to avoid misdiagnosis of hypertension or to facilitate definitive therapy when indicated.

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Clinical Uses of Ultrasound in Diagnosis

SINCE THE ADVENT of sonar in the 1940's, advances in ultrasound have made it increasingly valuable in therapeutic and diagnostic medicine. Diagnostic approaches with ultrasound have been refined with increased knowledge and understanding of the various methods of information display as well as development of a variety of transducers.

In studies of the head, the most common procedure is echoencephalography—localization of the midline of the brain. The midline structures are identified and considered abnormal if there is more than a 3 mm shift. Tumors or subdural hematomas cannot be identified, but can be inferred, suspected or followed by electroencephalograms. The condition of hydrocephalic patients can be followed because echoes can be adjusted to determine the size of the lateral ventricles.

Special transducers have been developed to reflect echoes from the retina, choroid and sclera of the eye. Intraocular and retrabulbar lesions can be differentiated even if the lens is opaque. Fluid in the paranasal sinuses can be detected with ultrasound. Methods of evaluating thyroid masses and cysts as well as thyroglossal cysts are being developed. Laryngeal movement also is under the scrutiny of some ultrasound specialists.

A most important and relatively simple use is found in gynecology and obstetrics. Ultrasound can be used to verify the diagnosis of multiple gestations, hydatidiform mole, fetal demise, cephalo-pelvic disproportion, fetal maturity, fetal presentation, and accurate biparietal measurements in a breech presentation or obese mother. Anencephaly and hydrocephaly are two anomalies that can be accurately diagnosed. Ectopic pregnancy and solid or cystic lesions of the tubes or ovaries can be differentiated. The placenta can be accurately located in case of suspected placenta previa. The Doppler ultrasound equipment converts the fetal heart tones to audible sounds and is auscultated with a stethescope as early as ten-weeks' gestation. The placenta also can be located, but the technique is best used with the aid of B scan ultrasound in such instances.

Abdominal masses are frequently a puzzle even after other studies are completed. Ultrasound can be used to identify cystic, solid and retroperitoneal masses anywhere in the abdomen. The presence of pancreatic as well as hepatic and splenic tumors and vascular anomalies can be determined. A radiographic nonfunctioning gall bladder often is found with ultrasound to have cholelithiasis; therefore, the risk of unnecessary laparotomy is reduced. Second dose cholecystography also can be avoided in allergic patients. In cases of abdominal masses in pediatric patients ultrasound probably should be used because it is noninvasive and may meet less patient resistance than a painful, invasive procedure. Cystic or solid renal masses are simply differentiated. Even complex renal masses yield useful information when ultrasound is used. Free fluid in the abdomen can be easily differentiated.

Thoracic ultrasound is less useful because the sound waves do not transcend air. The fascinating field of echocardiography makes ultrasound a valuable tool in the diagnosis of cardiovascular disease. Other thoracic diseases identifiable with ultrasound include pleural effusion, pulmonary infarction and pulmonary embolism. Vascular lesions such as aneurysms of the abdominal aorta and, under special conditions, thoracic aorta are located and measured with a high degree of accuracy, even to the extent that dissection of the aneurysm can be determined if the approach is nearly or completely perpendicular to the dis-